CCSS Advanced Algebra 3 AA Unit 1: Solving Equations Notes Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **I can SOLVE EQUATIONS by GRAPHING** | **I can SOLVE QUADRATIC EQUATIONS by REVERSING OPERATIONS.** |
| To solve the equation  GRAPHICALLY, you set up the functions:  y = \_\_\_\_\_\_\_\_\_\_\_\_\_ and y = \_\_\_\_\_\_\_\_\_\_\_\_\_ in  your calculator and find the \_\_ -coordinate of the point of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | To solve the equation by REVERSING OPERATIONS  1st: \_\_\_\_\_\_\_\_\_\_\_\_ to both sides of the equation.  2nd: \_\_\_\_\_\_\_\_\_\_\_\_ to both sides of the equation.  3rd: \_\_\_\_\_\_\_\_\_\_\_\_\_ to both sides of the equation.  4th: \_\_\_\_\_\_\_\_\_\_\_\_\_ to both sides of the equation.  The solutions are x = \_\_\_\_\_\_\_ or x = \_\_\_\_\_\_\_\_ |
| **I can SOLVE QUADRATIC EQUATIONS by FACTORING and the ZERO PRODUCT PROPERTY.** | **I can WRITE QUADRATIC FUNCTIONS in GRAPHING FORM (including finding the dilation factor).** |
| To solve the equation . First convert to FACTORED FORM using   |  |  | | --- | --- | |  |  | |  |  |   ( )( ) = 0  Solve using the ZERO PRODUCT PROPERTY by  setting \_\_\_\_\_\_\_\_ = 0 and \_\_\_\_\_\_\_\_\_\_= 0  The solutions are x = \_\_\_\_\_\_ or x = \_\_\_\_\_\_\_. | GRAPHING FORM:  If the vertex of a parabola is (3, -5), replace the  \_\_\_\_ with 3 and the \_\_\_\_ with -5.  To find the DILATION FACTOR (a), you take any  other point on the parabola and  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Then solve for a. |
| **I can WRITE QUADRATIC FUNCTIONS in FACTORED FORM (including finding the dilation factor).** | **I can SOLVE ABSOLUTE VALUE EQUATIONS by REVERSING OPERATIONS.** |
| FACTORED FORM:  If the x-intercepts of a parabola are x = 2 and x = -8,  replace the \_\_\_\_ with 2 and the \_\_\_\_ with -8.  To find the DILATION FACTOR (a), you take any  other point on the parabola and  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Then solve for a. | To solve the equation by REVERSING OPERATIONS  1st: \_\_\_\_\_\_\_\_\_\_\_\_ to both sides of the equation.  2nd: \_\_\_\_\_\_\_\_\_\_\_\_ to both sides of the equation.  3rd: Set \_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_ or \_\_\_\_\_.  4th: \_\_\_\_\_\_\_\_\_\_\_\_\_ to both sides of the equation.  The solutions are x = \_\_\_\_\_\_\_ or x = \_\_\_\_\_\_\_\_ |
| **I can SOLVE SQUARE ROOT EQUATIONS by REVERSING OPERATIONS.** | **I can SOLVE ONE-VARIABLE INEQUALITIES and represent the solutions on a NUMBER LINE and as an INEQUALITY.** |
| To solve the equation by REVERSING OPERATIONS  1st: \_\_\_\_\_\_\_\_\_\_\_\_ to both sides of the equation.  2nd: \_ \_\_\_\_\_\_\_\_\_ to both sides of the equation.  3rd: \_\_\_\_\_\_\_\_\_\_\_\_ to both sides of the equation.  4th: \_\_\_\_\_\_\_\_\_\_\_\_\_ to both sides of the equation.  The solution is x = \_\_\_\_\_\_\_ | To find the BOUNDARY POINT, rewrite the  INEQUALITY as an \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and solve for x.  To determine where the solutions are relative to the  BOUNDARY POINT, choose a \_\_\_\_\_\_\_\_\_\_\_\_\_ POINT and check to see if it is a SOLUTION to the INEQUALITY.  If the \_\_\_\_\_\_\_\_ POINT is a SOLUTION, all SOLUTIONS to the INEQUALITY are in the \_\_\_\_\_\_\_  region(s) of the number line as the \_\_\_\_\_\_\_\_ POINT.  If the \_\_\_\_\_\_\_\_ POINT is NOT A SOLUTION, all  SOLUTIONS to the INEQUALITY are in \_\_\_\_\_\_\_\_\_\_  region(s) of the number line as the \_\_\_\_\_\_\_\_ POINT. |